

# **OPERATOR MANUAL**

## **Basil® 9600 Bedding Dispenser**

**(2008-05-21)**

**P122994-981**

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# A WORD FROM STERIS CORPORATION

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This manual contains important information on the proper use of this equipment. Refer to *SECTION 5, ROUTINE MAINTENANCE*, for instructions in routine care of this equipment. All personnel and department heads are urged to carefully review and become familiar with the *Safety Precautions* and instructions contained herein. These instructions should be retained in a conveniently accessible area for quick reference. This equipment is specifically designed only for the uses outlined in this manual.

Complete instructions for uncrating and connecting utilities, as well as equipment drawings, have been furnished. If missing, contact STERIS for replacement copies, giving the serial and model numbers of the unit.

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## Advisory

**IMPORTANT:** *A listing of the Safety Precautions to be observed when operating this equipment can be found in SECTION 1. Do not operate the equipment until you have become familiar with this information.*

Any alteration of this equipment not authorized or performed by STERIS will void the warranty. Alteration of equipment which could adversely affect its operation and efficacy may violate national, state and local regulations and could jeopardize your insurance coverage.

To help ensure operators are adequately trained in the safe use of the equipment, STERIS recommends:

- all personnel who operate or maintain the equipment are trained in its operation and in its safe use;
- personnel working with toxic chemicals and vapors (if applicable) have comprehensive instructions in the equipment process, relevant health hazards and methods to detect the escape of toxic materials;
- there is regular training of all personnel concerned with the operation and maintenance of the equipment; that attendance records are maintained; and that evidence of understanding is demonstrated.

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## Indications For Use

The **Basil® 9600 Bedding Dispenser** is a semi-automated unit designed to dispense bedding into two rodent cages simultaneously as they are placed on the work surface.

## Service Information

A thorough preventive maintenance program is essential to help ensure safe and proper equipment operation. Customers are encouraged to contact STERIS concerning extended service maintenance agreements to give the equipment planned maintenance.

A global network of skilled service specialists can provide periodic inspections and adjustments to help ensure low-cost peak performance. STERIS can provide information regarding the annual maintenance agreements.

STERIS carries a complete line of accessories for use in this equipment. A STERIS representative will gladly review these with you.

## Certification

This **Basil 9600 Bedding Dispenser** meets the applicable requirements of the following standards, as certified by UL:

- **2011, Outline of Investigation for Factory Automation Equipment.**
- **CSA C22.2, N° 14-05, Industrial Control Equipment.**

This equipment also complies with the following regulations:

### Governing Directive for the Affixing of the CE Mark:

Machinery Directive 98/37/EC.



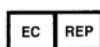
- **Standards applied to demonstrate conformity to the directives:**
  - International Standard EN/IEC 61326-1, First Edition;
  - International Standard EN/IEC 61010-1, Second Edition.
- **Conformity to Other Applicable Directives:**

Electromagnetic Compatibility Directive (89/336/EEC) amended by Directive 91/263/EEC, Directive 92/31/EEC and Directive 93/68/EEC; Low Voltage Directive (2006/95/EEC).



Corporation STERIS Canada Québec, Qc, CANADA	ISO 13485 ISO 9001 Certified Facility
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The base language of this document is **ENGLISH**. Any translations must be made from the base language document.



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# SAFETY PRECAUTIONS

1

The following *Safety Precautions* **must** be observed when operating this Basil® 9600 Bedding Dispenser. WARNING indicates the potential for personal injury, and CAUTION indicates the potential for damage to equipment. For emphasis, certain *Safety Precautions* are repeated throughout the manual. **It is important to review ALL Safety Precautions before operating or servicing the unit.**

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## WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:



Only STERIS or STERIS-trained service personnel should make repairs and adjustments to this equipment. Maintenance done by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty, or result in costly damage. Contact STERIS regarding service options.



Regularly scheduled preventive maintenance is required for safe and reliable operation of this equipment. Contact STERIS to schedule preventive maintenance.

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## WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:



Disconnect all utilities to equipment before servicing. Do not service the equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.



Fasteners and star washers are used to ensure protective bonding continuity. Always reinstall any star washer which may have been removed during installation or servicing.

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## WARNING – HEALTH AND/OR EYE INJURY HAZARD:



Although dispenser is equipped with a dust collector, dust could be generated during use. Wear appropriate personal protective equipment (PPE) if required.



Bedding dust can cause respiratory problems and eye irritation. Read instructions on bedding package for details. Always wear appropriate personal protective equipment (PPE) when operating the bedding dispenser.

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## WARNING – LACERATION HAZARD:



Keep arms and fingers away from lower part of the dispensing hopper. Do not try to clear bedding blockage during dispensing. Arm or fingers could get caught by flipper causing serious injuries.

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## WARNING – SLIPPING HAZARD:



To prevent slips, keep floor clean. Promptly clean up any spilled bedding.

## CAUTION – POSSIBLE EQUIPMENT DAMAGE:



Use nonabrasive cleaners when cleaning unit. Follow directions on containers and rub in a back-and-forth motion, in same direction as surface grain. Abrasive cleaners will damage stainless steel. Cleaners rubbed in a circular motion or applied with a wire brush or steel wool on door and chamber assemblies will damage stainless steel. Do not use these cleaners on painted surfaces.

The tables below contain symbols which may be on your Basil 9600 Bedding Dispenser components:

**Table 1-1. Definition of Symbols on Bedding Dispenser**

Symbol	Definition
	Transfer of Heat, Hot Surface.
	Protective Earth (Ground).
	Warning! Risk of Electrical Shock.
	Attention, Refer to Manual for Further Instructions.
	Fuse Identification.
	Power ON For Part of the Unit.
	Power OFF For Part of the Unit.
	Keep Hands Away.
	Manufacturer Address and Telephone for Service.

**Table 1-2. Definition of Symbols on Bedding Dispenser Identification Nameplate**

<b>Symbol</b>	<b>Definition</b>
<b>MODEL</b>	Model Number of the Unit.
<b>S/N</b>	Serial Number of the Unit.
<b>kVA</b>	Power Rating of the Unit.
<b>V__~</b>	Voltage. Number of Phases (3 or 1 [blank]). Alternating Current.
<b>A</b>	Amperage Rating of the Unit.
<b>Hz</b>	Hertz – Frequency of the Unit.
<b>YEAR</b>	Year of Manufacture of the Unit.
<b>WIRE</b>	Number of Wires in the Electrical Cable (Ground Not Included).

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**IMPORTANT:** A listing of the Safety Precautions to be observed when operating this equipment can be found in SECTION 1. Do not operate equipment until you have become familiar with this information.

A room layout, floor plan and equipment drawing, showing all utility and space requirements, were shipped with the unit. The clearance space, specified on the floor plan, is necessary for proper installation, operation and maintenance of the unit. If any of these documents are missing or misplaced, contact STERIS, giving the serial and model numbers of the unit. Replacement copies will be sent promptly.

## 2.1 Technical Specifications

### 2.1.1 Permissible Environmental Conditions

This **Basil® 9600 Bedding Dispenser** is designed to give optimal results in environmental conditions as follows:

- Indoor use only;
- Altitude of operation up to 6,560 ft (2,000 m);
- Temperature 41 to 104 °F (5 to 40 °C);
- Maximum relative humidity is less than 85% for temperatures up to 88°F (31°C) decreasing linearly to 50% relative humidity at 104°F (40°C).

### 2.1.2 Noise Level

Equivalent Sound Pressure Level at work station (measured 39" [1 meter] away from equipment and at 63" [1.6 meters] from ground): **75.4 dB (A)**.

**IMPORTANT:** Although equipment noise level is below the maximum prescribed by the standard, operators should wear ear protection.

### 2.1.3 Amperage and Power Consumption

Refer to equipment drawing (920-002-828) or identification nameplate for amperage and power consumption.

### 2.1.4 Seismic Anchorage

Bedding Dispenser is built to seismic building code requirements.

## 2.2 Installation Checklist

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Before operating the unit, complete the following checklist to ensure complete and correct installation. Contact STERIS to schedule a demonstration of proper equipment operation.

- ☐ Shutoff valve (not by STERIS), for maintenance purposes, is installed on the air line and is in compliance with local codes and standards.
- ☐ Disconnect switch (not by STERIS), capable of being locked in OFF position only, is installed in the electrical supply line in the same room as the bedding dispenser and within 10 ft. (3 m) of the electrical control box.

***NOTE: If unit is installed next to other equipment, shutoff valve and disconnect switch should be located so that service can be shut off to one piece of equipment at a time.***

- ☐ Bedding dispenser is positioned, as shown on equipment drawing, with required clearance space and in relation to building air supply line.
- ☐ Bedding dispenser is level. If necessary, use adjustable legs and/or add shims (not included) to level unit.
- ☐ Dust collector is connected to exhaust fan outlet.
- ☐ Nonslip floor surface (not by STERIS) around unit.

***IMPORTANT: After a few weeks of operation, inspect unit for leaks. Retighten all clamps and connections.***

# COMPONENT IDENTIFICATION

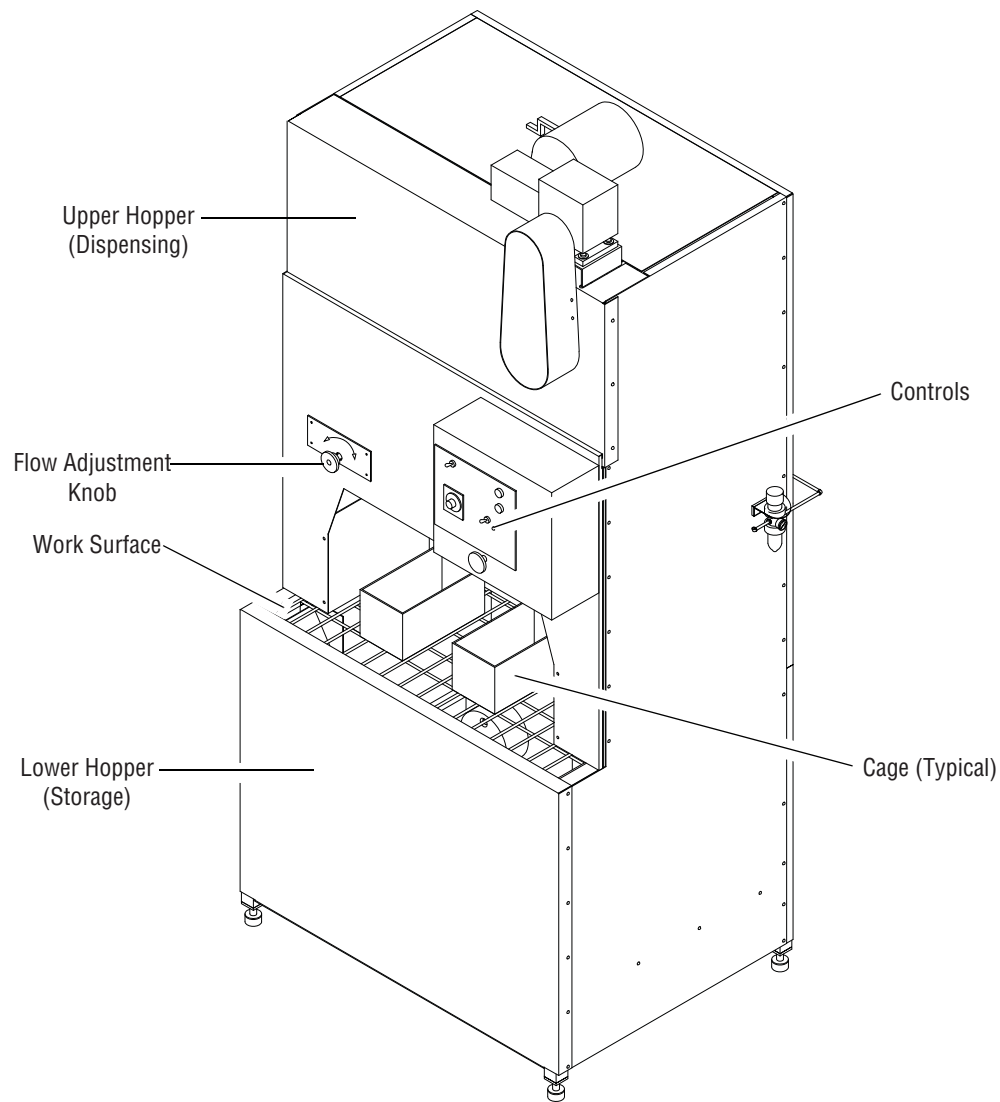
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**IMPORTANT:** A listing of the Safety Precautions to be observed when operating this equipment can be found in SECTION 1. Do not operate equipment until you have become familiar with this information.

## 3.1 Basil® 9600 Bedding Dispenser – General

Become familiar with all components and control locations before operating the bedding dispenser (see Figure 3-1 to Figure 3-4)

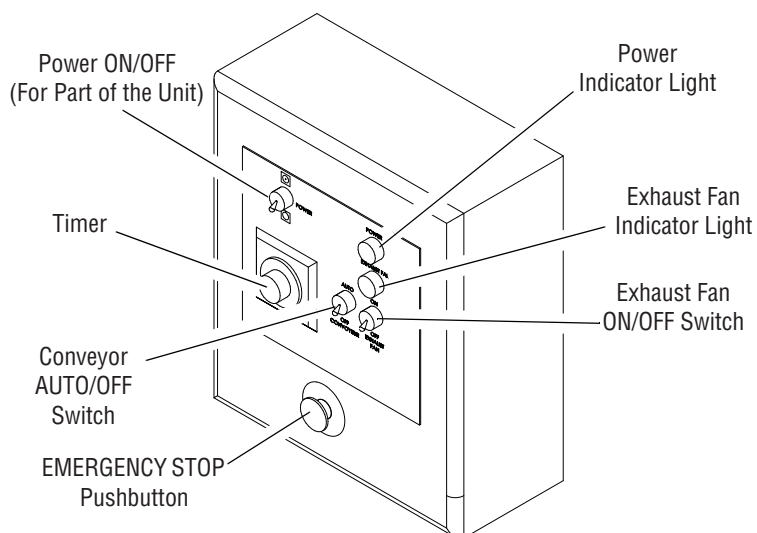


**Figure 3-1. Basil 9600 Bedding Dispenser – General View**

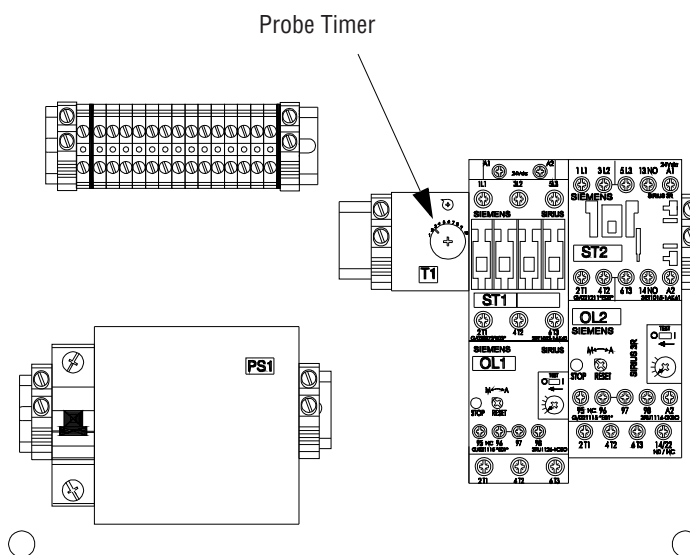
## 3.2 Controls

The bedding dispenser **control panel** (see Figure 3-2) includes:

- Main power ON/OFF toggle switch (cuts power on part of the unit)
- Power and exhaust fan indicator lights
- Timer for precise metering and distribution of bedding
- Conveyor AUTO/OFF switch for the bedding transfer system
- Exhaust Fan ON/OFF switch
- EMERGENCY STOP pushbutton
- Probe timer (inside control box, see Figure 3-3)



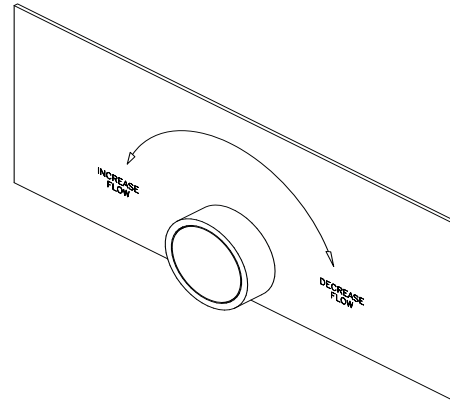
**Figure 3-2. Controls**



**Figure 3-3. Inside Control Box – Detail**



The bedding dispenser flow adjustment knob, located above the work surface (see Figure 3-4) is used to increase or decrease bedding flow.

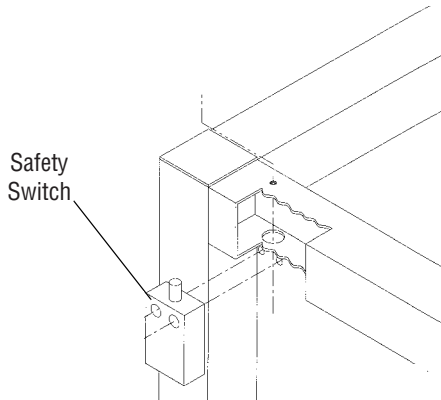


**Figure 3-4. Flow Adjustment Knob**

### **3.3 Safety Switch**

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As a protection during maintenance procedures, the bedding dispenser is equipped with a safety switch which prevents the operation of the conveyor when the top panel is removed (see Figure 3-5).



**Figure 3-5. Safety Switch**

### **3.4 Basic Settings**

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#### **3.4.1 Aspen Chip Bedding Settings (With Agitator)**

The Basil® 9600 Bedding Dispenser is tested and preset at factory using Bed-o-cobs®<sup>1</sup> bedding brand. If Bed-o-cobs or ALPHA-dri™<sup>2</sup> bedding brand is used, refer to *SECTION 3.5, SPECIAL INSTALLATIONS*, for more information about installation and basic settings.

If aspen chip bedding type is used, enter the following settings:

1. To find the bedding dispensing door opening stroke, calculate the total number of turns between the minimum setting (Decrease Flow) of the flow adjustment knob and its maximum setting (Increase Flow) (see Figure 3-6).

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1. Bed-o-cobs is a registered trademark of The Anderson's Inc.

2. ALPHA-dri is a trademark of Shepherd Specialty Papers.

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Diagram of the Control Box Cover. The cover features a large circular timer knob on the left and a control panel on the right with several smaller knobs and switches. Labels with leader lines point to the 'Timer' and the 'Control Box Cover'.

### Component Identification

### 3.4.2 Recycled Paper Bedding Settings (With Agitator)

If recycled paper bedding is used, enter the following settings:

1. To find the bedding dispensing door opening stroke, calculate the total number of turns between the minimum setting (Decrease Flow) of the flow adjustment knob and its maximum setting (Increase Flow) (see Figure 3-6).
2. Set the flow adjustment knob at 1/2 of the number of turns previously calculated so the bedding dispensing door can be opened at 1/2 of its stroke (see Figure 3-6).
3. Using Phillips screwdriver, loosen two screws from control box cover. Open control box cover (see Figure 3-7).
4. Set probe timer (adjustable from 0.1 sec. to 100 hr.) at 15 seconds to adjust the total bedding dispensing time (see Figure 3-8).
5. Close control box cover and tighten two screws to secure.
6. Set timer at 1/4 to adjust the continuous flow maximum dispensing time (see Figure 3-7).

## 3.5 Special Installations

### 3.5.1 Removing Agitator



**WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Only STERIS or STERIS-trained service personnel should make repairs and adjustments to this equipment. Non-routine maintenance performed by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty, or result in costly damage. Contact STERIS regarding service options.



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to equipment before servicing. Do not service the equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.

To use the Basil 9600 Bedding Dispenser with the Bed-o-cobs or ALPHA-dri bedding brand, STERIS recommends that the following modifications be performed by a qualified service technician:

1. If bedding dispenser is **ON**, put the bedding dispenser power switch in the **OFF** position.
2. Ensure that lockout-tagout and electrical safety related work practices have been followed. Verify that all utility valves have been properly locked out and that lines are depressurized.
3. Turn the flow adjustment knob to increase the flow to the maximum setting.
4. Manually open the bedding dispensing door (see Figure 3-9).

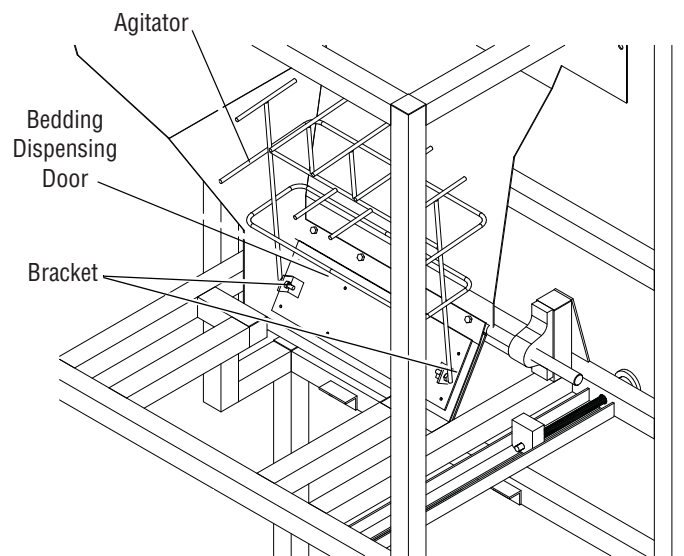
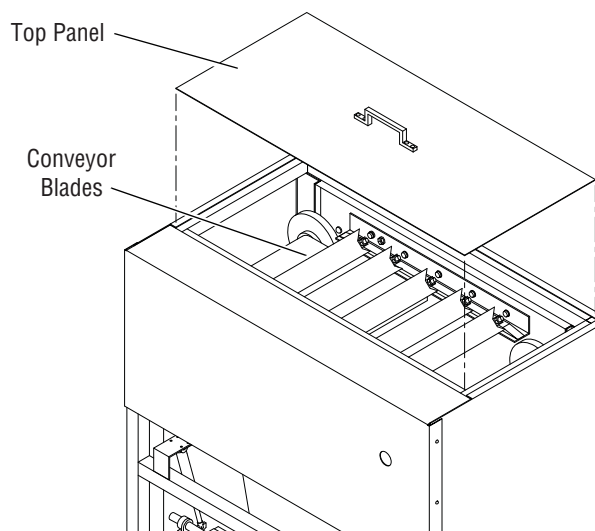


Figure 3-9. Dispensing Mechanism

5. Remove the two 1/2"-20 nuts that hold the agitator in place (see Figure 3-9).
6. Remove agitator from brackets (see Figure 3-9).
7. Remove the top panel of the bedding dispenser (see Figure 3-10).



**Figure 3-10. Top Panel and Conveyor Blades**

**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Fasteners and star washers are used to ensure protective bonding continuity. Always reinstall any star washer which may have been removed during installation or servicing.

8. Remove 1/4"-20 nuts and remove two or three conveyor blades.
9. Take the agitator out of the unit.
10. Reinstall the conveyor blades with the nuts previously removed.
11. Reinstall the top panel on the unit.
12. Open utility lines and unlock electrical disconnect switch. Return power switch to **ON** position.
13. Readjust the bedding flow using the flow adjustment knob as explained in *SECTION 3.5.2, BED-O'COBS BEDDING SETTINGS (WITHOUT AGITATOR)* or *SECTION 3.5.3, ALPHA-DRI BEDDING SETTINGS (WITHOUT AGITATOR)*.

### **3.5.2 Bed-o'cobs Bedding Settings (Without Agitator)**

1. To find the bedding dispensing door opening stroke, calculate the total number of turns between the minimum setting (Decrease Flow) of the flow adjustment knob and its maximum setting (Increase Flow) (see Figure 3-6).
2. Set the flow adjustment knob at 1/8 of the number of turns previously calculated so the bedding dispensing door can be opened at 1/8 of its stroke (see Figure 3-6).
3. Using Phillips screwdriver, loosen two screws from control box cover. Open control box cover (see Figure 3-7).
4. Set probe timer (adjustable from 0.1 sec. to 100 hr.) at 50 seconds to adjust the total bedding dispensing time (see Figure 3-8).

5. Close control box cover and tighten two screws to secure.
6. Set timer at 1/4 to adjust the continuous flow maximum dispensing time (see Figure 3-7).

### **3.5.3 ALPHA-dri Bedding Settings (Without Agitator)**

1. To find the bedding dispensing door opening stroke, calculate the total number of turns between the minimum setting (Decrease Flow) of the flow adjustment knob and its maximum setting (Increase Flow) (see Figure 3-6).
2. Set the flow adjustment knob at 1/4 of the number of turns previously calculated so the bedding dispensing door can be opened at 1/4 of its stroke (see Figure 3-6).
3. Using Phillips screwdriver, loosen two screws from control box cover. Open control box cover (see Figure 3-7).
4. Set probe timer (adjustable from 0.1 sec. to 100 hr.) at 50 seconds to adjust the total bedding dispensing time (see Figure 3-8).
5. Close control box cover and tighten two screws to secure.
6. Set timer at 1/4 to adjust the continuous flow maximum dispensing time (see Figure 3-7).

### **3.5.4 Other Bedding Types or Brands**

If any other bedding brand is used, adjust the bedding settings according to the basic settings of the bedding brand or type that is the most similar.

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**IMPORTANT:** A listing of the Safety Precautions to be observed when operating this equipment can be found in SECTION 1. Do not operate equipment until you have become familiar with this information.

## 4.1 Before Operating Equipment

### **WARNING – HEALTH AND/OR EYE INJURY HAZARD:**

- Although dispenser is equipped with a dust collector, dust could be generated during use. Wear appropriate personal protective equipment (PPE) if required.
- Bedding dust can cause respiratory problems and eye irritation. Read instructions on bedding package for details. Always wear appropriate personal protective equipment (PPE) when operating the bedding dispenser.

**WARNING – LACERATION HAZARD:** Keep arms and fingers away from lower part of the dispensing hopper. Do not try to clear bedding blockage during dispensing. Arm or fingers could get caught by flipper causing serious injuries.

**WARNING – SLIPPING HAZARD:** To prevent slips, keep floor clean. Promptly clean up any spilled bedding.

**NOTE:** Refer to SECTION 3, COMPONENT IDENTIFICATION, for location of components not shown here.

1. Locate the bedding dispenser controls (refer to Figure 3-2 to Figure 3-8).
2. Ensure bedding dispenser is correctly configured for type of bedding used (refer to SECTION 3.4, BASIC SETTINGS or SECTION 3.5, SPECIAL INSTALLATIONS).
3. Verify lower (storage) hopper contains bedding (see Figure 4-1). Fill as necessary.
4. **To fill the lower hopper**, dump bedding through the work surface grid from the front of the unit (see Figure 4-1).
5. Ensure the dust collection bag is installed at the back of the unit (see Figure 4-1).

**IMPORTANT:** Do not operate bedding dispenser without the dust collection bag in position.

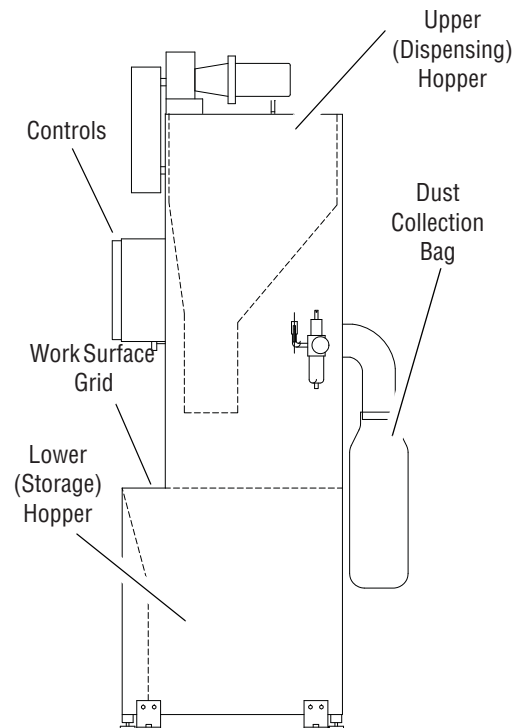


Figure 4-1. Hoppers and Dust Collection Bag



**WARNING – HEALTH AND/OR EYE INJURY HAZARD:**

- Although dispenser is equipped with a dust collector, dust could be generated during use. Wear appropriate personal protective equipment (PPE) if required.
- Bedding dust can cause respiratory problems and eye irritation. Read instructions on bedding package for details. Always wear appropriate personal protective equipment (PPE) when operating the bedding dispenser.

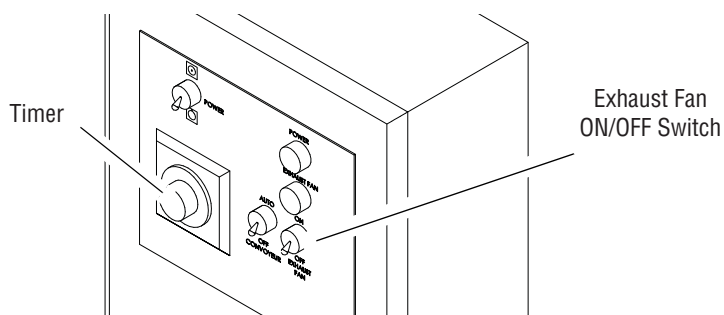


**WARNING – LACERATION HAZARD:** Keep arms and fingers away from lower part of the dispensing hopper. Do not try to clear bedding blockage during dispensing. Arm or fingers could get caught by flipper causing serious injuries.



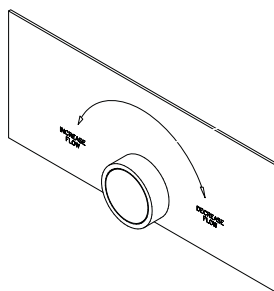
**WARNING – SLIPPING HAZARD:** To prevent slips, keep floor clean. Promptly clean up any spilled bedding.

6. Position the Power ON/OFF switch to **ON**.
7. Position the conveyor AUTO/OFF switch to **AUTO**.
  - With the Power ON/OFF switch positioned to **ON** and the Conveyor AUTO/OFF switch positioned to **AUTO**, a continuous, shovel-type conveyor system automatically transfers bedding from the lower hopper to the upper hopper.
  - When the Conveyor AUTO/OFF switch is in the **OFF** position, bedding can be dispensed without the conveyor running, but only until the upper hopper is empty.
8. To adjust the amount or flow of bedding dispensed to cages:
  - a. Use the Timer (see Figure 4-2) to increase or decrease the length of time the bedding release trap remains open.



**Figure 4-2. Adjust Timer**

- b. Use the Flow Adjustment Knob (see Figure 4-3) to increase or decrease the flow of bedding: turn the knob to the left to increase flow; turn the knob to the right to decrease flow.



**Figure 4-3. Adjust Bedding Flow**

9. Position the Exhaust Fan switch to ON (see Figure 4-2).



## 4.2 Dispensing the Bedding



### **WARNING – HEALTH AND/OR EYE INJURY HAZARD:**

- Although dispenser is equipped with a dust collector, dust could be generated during use. Wear appropriate personal protective equipment (PPE) if required.
- Bedding dust can cause respiratory problems and eye irritation. Read instructions on bedding package for details. Always wear appropriate personal protective equipment (PPE) when operating the bedding dispenser.



**WARNING – LACERATION HAZARD:** Keep arms and fingers away from lower part of the dispensing hopper. Do not try to clear bedding blockage during dispensing. Arm or fingers could get caught by flipper causing serious injuries.



**WARNING – SLIPPING HAZARD:** To prevent slips, keep floor clean. Promptly clean up any spilled bedding.

1. Place two cages on the work surface and push them toward the mechanical bar at the back of the unit.

*NOTE: Bedding is dispensed when cages placed on the work surface actuate a mechanical bar, which in turn actuates a valve to release bedding for the preset length of time.*

2. After the bedding is dispensed, remove the cages from the work surface.

*NOTE: For efficiency, fill two cages at a time. If there are an odd number of cages and one cage is placed on the work surface, the unit will still dispense bedding for two cages. Any spillage will fall through the work surface grid and back into the lower hopper.*

## 4.3 Shutdown



### WARNING – HEALTH AND/OR EYE INJURY HAZARD:

- Although dispenser is equipped with a dust collector, dust could be generated during use. Wear appropriate personal protective equipment (PPE) if required.
- Bedding dust can cause respiratory problems and eye irritation. Read instructions on bedding package for details. Always wear appropriate personal protective equipment (PPE) when operating the bedding dispenser.

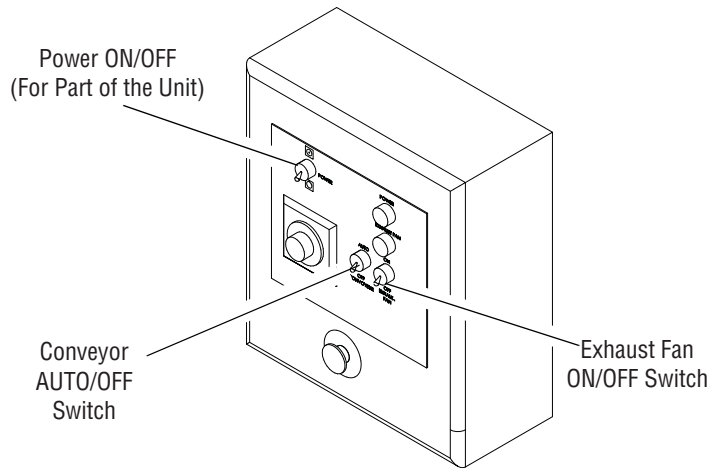


**WARNING – LACERATION HAZARD:** Keep arms and fingers away from lower part of the dispensing hopper. Do not try to clear bedding blockage during dispensing. Arm or fingers could get caught by flipper causing serious injuries.



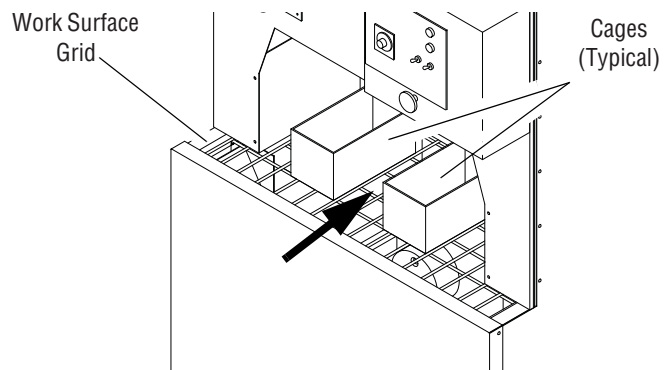
**WARNING – SLIPPING HAZARD:** To prevent slips, keep floor clean. Promptly clean up any spilled bedding.

1. At the end of the day, empty the upper hopper as follows:
  - a. Position the Conveyor AUTO/OFF switch to **OFF** (see Figure 4-4).



**Figure 4-4. Controls for Shutdown**

- b. Place a cage on the work surface and push it toward the back of the unit to actuate the mechanical bar (see Figure 4-5).



**Figure 4-5. Dispensing Bedding**

- c. Push cages again until no more bedding falls when mechanical bar is activated. When no more bedding comes out of the dispenser, the upper hopper is empty.

**NOTE:** Any spillage will fall through the work surface grid and back into the lower hopper.

2. Position Exhaust Fan ON/OFF switch to **OFF** (see Figure 4-4).
3. Position Power ON/OFF switch to **OFF** (see Figure 4-4).



**IMPORTANT:** A listing of the Safety Precautions to be observed when operating this equipment can be found in SECTION 1. Do not operate equipment until you have become familiar with this information.



**WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:**

- Regularly scheduled preventive maintenance, in addition to faithful performance of minor maintenance described in this manual, is required for safe and reliable operation of this equipment. Contact STERIS to schedule preventive maintenance.
- Only STERIS or STERIS-trained service personnel should make repairs or adjustments to this equipment. Maintenance done by inexperienced, unqualified personnel, or installation of unauthorized parts could cause personal injury, invalidate warranty, or result in costly damage. Contact STERIS regarding service options.



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to equipment before servicing. Do not service equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.



**WARNING – LACERATION HAZARD:** Keep arms and fingers away from lower part of the dispensing hopper. Do not try to clear bedding blockage during dispensing. Arm or fingers could get caught by flipper causing serious injuries.

Procedures described in this section should be performed at regular intervals as indicated.

Local conditions (air quality, amount of usage) may necessitate more frequent maintenance than indicated. Customer should maintain a record of all maintenance procedures performed on the unit.

Should a problem occur, refer to SECTION 6, TROUBLESHOOTING. Refer to SECTION 7, REPLACEMENT PARTS AND CONSUMABLES for replacement parts list.

## 5.1 Preventive Maintenance Schedule

A preventive maintenance agreement is available to help assure peak equipment performance and help avoid unscheduled down-time. The agreement includes maintenance, adjustments, and replacement of worn parts by a qualified technician on a scheduled basis. Contact STERIS for details. Maintenance procedures should be performed only by a qualified technician. Preventive Maintenance is not covered under warranty.

**Table 5-1** is to be used as a preventive maintenance record and, along with the instructions in this section, as a guide to performing preventive maintenance.

**Table 5-1. Preventive Maintenance Guide**

Service Performed	Minimum Frequency
<b>1.0 PREPARATION FOR PREVENTIVE MAINTENANCE</b>	
1.1 Discuss equipment with department personnel.	12 x/yr
1.2 When necessary, shut off all building services and drain all lines.	12 x/yr
1.3 Before servicing equipment, use Lockout-Tagout practices. Always follow local occupational health and safety regulations as well as electric and plumbing options.	Every Inspection
1.4 Verify equipment disconnect device is within easy reach and accessible to operator at all times.	Every Inspection
<b>2.0 MISCELLANEOUS CHECKS</b>	
2.1 Empty dust collection bag as described in <i>SECTION 5.2.2, EMPTY DUST COLLECTION BAG.</i>	Weekly or As Required
2.2 Inspect mechanical parts for obvious wear.	A/R
2.3 Verify proper adjustment of clutch.	6 x/yr
2.4 Verify proper amount of bedding is being dispensed by the unit into the cages.	6 x/yr
2.5 Verify proper operation of the toggle switches.	6 x/yr
2.6 Verify proper operation of the timer.	6 x/yr
2.7 Verify proper air pressure for regulator.	6 x/yr
2.8 Verify air filter does not contain water.	6 x/yr
2.9 Clean the photoelectric switch of dust as described in <i>SECTION 5.3.1, CLEAN PHOTOELECTRIC SWITCH.</i>	4 x/yr
2.10 Verify the gear box oil level as described in <i>SECTION 5.3.4, VERIFY GEARBOX OIL LEVEL.</i>	4 x/yr

**Table 5-1. Preventive Maintenance Guide (Cont'd)**

Service Performed		Minimum Frequency
<b>3.0 CONVEYOR SYSTEM</b>		
3.1	Verify the shovel-type blades are bringing bedding to the top of the hopper. Verify the unit automatically shuts off the shovel conveyor when the hopper is full.	6 x/yr
3.2	Verify proper adjustment and tracking on the take-up bearings of the conveyor.	6 x/yr
3.3	Grease the conveyor bearings as described in <i>SECTION 5.3.2, GREASE CONVEYOR BEARINGS</i> .	4 x/yr
<b>4.0 FINAL CHECKOUT AND TEST</b>		
4.1	Clean dirt and lint from components. Verify all wiring, terminals, and socket connections for damage or fraying.	6 x/yr
4.2	Verify unit has proper labels (CAUTION, WARNING).	6 x/yr
4.3	Reinstall any panel or cover removed. Inspect area to ensure removal of all materials used during inspection.	6 x/yr
4.4	Notify customer that preventive maintenance inspection is complete.	6 x/yr

## 5.2 Weekly Maintenance

### 5.2.1 Clean Unit Exterior



**CAUTION – POSSIBLE EQUIPMENT DAMAGE:** Use nonabrasive cleaners when cleaning unit. Follow directions on containers and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners will damage stainless steel. Cleaners rubbed in a circular motion applied with a wire brush or steel wool will scratch and dull stainless steel. Do not use these cleaners on painted surfaces.

STERIS recommends cleaning the Basil® 9600 Bedding Dispenser as follows:

*NOTE: Follow manufacturer's recommendations for proper cleaner use (concentrations, precautions to be taken, etc.). Read the MSDS for safety information.*

At least once a week, clean unit exterior using a general cleaner to remove general stains and a stainless-steel stain remover for stubborn stains. Use a stainless-steel polish to keep equipment looking like new.

1. Using a damp cloth or sponge, apply cleaner in a back-and-forth motion, in same direction as surface grain.
2. Thoroughly wipe off cleaner.
3. Polish surface with a clean, dry, lint-free cloth.

### 5.2.2 Empty Dust Collection Bag

**⚠ WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to equipment before servicing. Do not service equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.

At least once a week, empty dust collector bag as follows:

1. Lock building electrical disconnect switch to **OFF** position.
2. Remove 4-inch clamp holding dust collector bag in position.
3. Empty bag.
4. Reinstall bag in position, using clamp previously removed.
5. Unlock building electrical disconnect switch and position to **ON** position.

## 5.3 Quarterly Maintenance

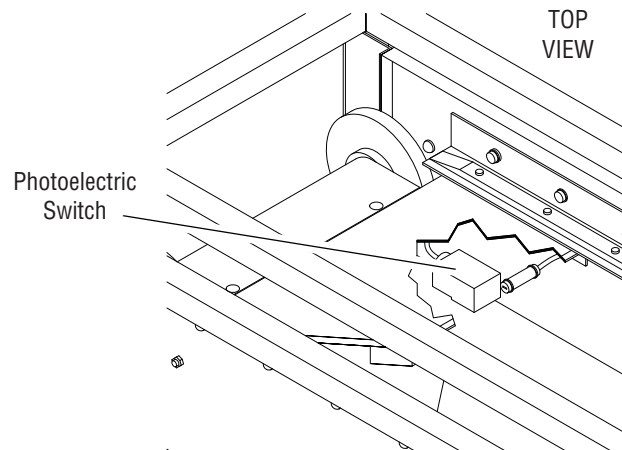
STERIS recommends that the following maintenance procedures be done on a quarterly basis.

### 5.3.1 Clean Photoelectric Switch

**⚠ WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Only STERIS or STERIS-trained service personnel should make repairs or adjustments to this equipment. Maintenance done by inexperienced, unqualified personnel, or installation of unauthorized parts could cause personal injury, invalidate warranty, or result in costly damage. Contact STERIS regarding service options.

**⚠ WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to equipment before servicing. Do not service equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.

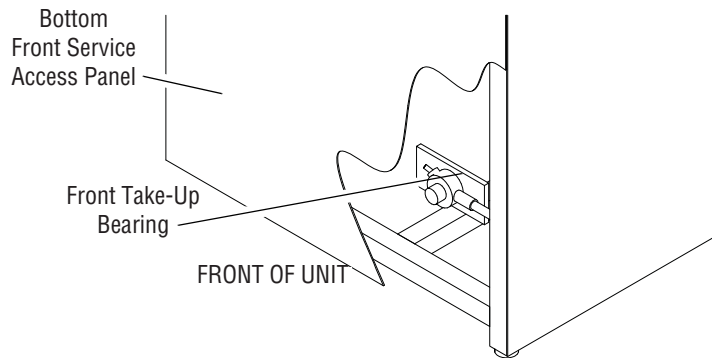
1. Lock building electrical disconnect switch to **OFF** position.
2. Remove the four 10-32 x 1-3/4" screws holding the top panel.
3. Remove the top panel and locate the photoelectric switch (see Figure 5-1).
4. Clean photoelectric switch with a dry rag.
5. Reinstall top panel and fasten with screws previously removed.
6. Unlock building electrical disconnect switch and position to **ON** position.



**Figure 5-1. Photoelectric Switch Location**

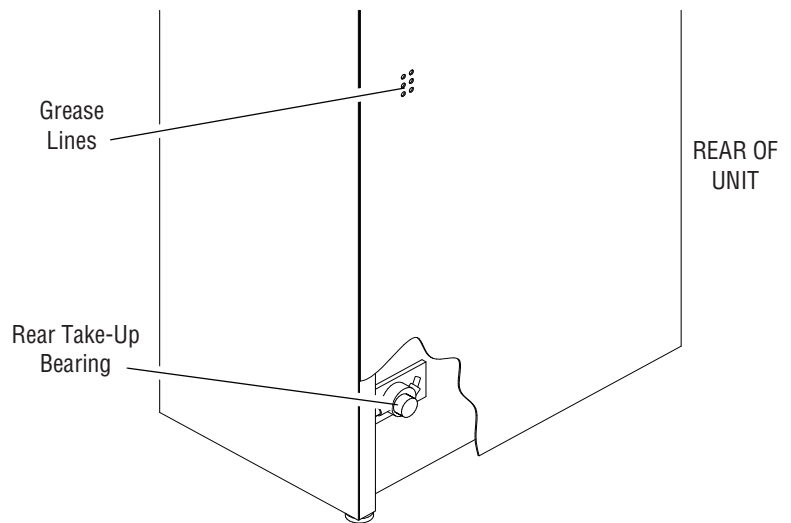
### 5.3.2 Grease Conveyor Bearings

1. Remove the twelve 10-32 x 3/8-inch truss-head screws holding the bottom front service access panel in position.
2. Locate the bearing grease cups:
  - Front take-up bearing is at the lower right front corner of the unit (see Figure 5-2).



**Figure 5-2. Front Take-Up Bearing Location**

- Rear take-up bearing is at the lower left rear corner of the unit (see Figure 5-3).
- Six small grease lines (two rows of three) are on the left side of the back panel of the unit (see Figure 5-3), for applying grease to rear take-up bearing.



**Figure 5-3. Rear Take-Up Bearing Location**

3. Apply two gun strokes of lithium-based grease to each bearing cup. Refer to *SECTION 7, REPLACEMENT PARTS AND CONSUMABLES*, for grease ordering information.
4. Reinstall bottom front service panel.

### 5.3.3 Clean Microswitch



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to equipment before servicing. Do not service equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.

Clean dust and bedding from the microswitch as follows:

*NOTE: Microswitch is located near the exhaust fan inlet.*

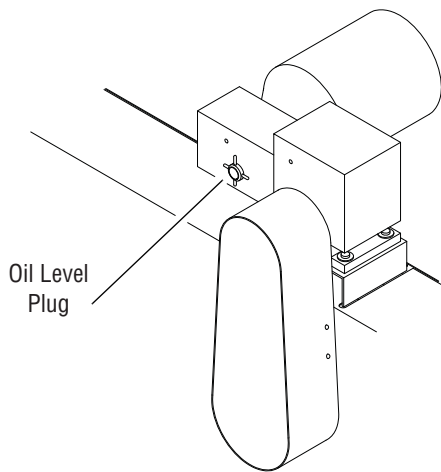
1. Lock unit electrical disconnect switch to **OFF** position.
2. Wipe the microswitch with a clean cloth to remove dust and bedding from mechanism.
3. Unlock unit electrical disconnect switch and position to **ON** position.

### 5.3.4 Verify Gearbox Oil Level



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to equipment before servicing. Do not service equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.

1. Remove gear box bottom oil level plug (see Figure 5-4).



**Figure 5-4. Oil Level Plug**

2. Verify that oil level is even with bottom of hole. Refill with oil as necessary. See *SECTION 7, REPLACEMENT PARTS AND CONSUMABLES, Table 7-2* for list of approved lubricants.
3. Reinstall oil level plug.



**! IMPORTANT:** A listing of the Safety Precautions to be observed when operating this equipment can be found in SECTION 1. Do not operate equipment until you have become familiar with this information.

**! WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Only STERIS or STERIS-trained service technicians should make repairs and adjustments to this equipment. Maintenance done by inexperienced, unqualified personnel, or installation of unauthorized parts could cause personal injury, invalidate warranty, or result in costly damage. Contact STERIS regarding service options.

**! WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to equipment before servicing. Do not service equipment unless all utilities have been properly locked out. Always follow local electrical safety-related work practice standards.

This section contains detailed information on types of equipment malfunctions likely to occur and possible causes and corrective actions.

If you are unable to correct the problem with use of the following Troubleshooting Chart, or if a problem occurs that is not described on chart, please call STERIS. A factory-trained technician will promptly place your equipment in proper working condition. Service charges may be incurred. Consult your warranty for details.

*NOTE: Never allow unqualified persons to service equipment.*

**Table 6-1. Troubleshooting Chart**

PROBLEM	POSSIBLE CAUSE AND CORRECTION
Bedding is not dispensed.	<ol style="list-style-type: none"> <li>1. Use bedding recommended by manufacturer. Call STERIS for details.</li> <li>2. Upper (dispensing) hopper empty – Verify amount of bedding in lower (storage) hopper and refill as necessary.</li> <li>3. If lower hopper is full, clean photoelectric switch as explained in SECTION 5.3.1, <i>CLEAN PHOTOELECTRIC SWITCH</i>.</li> <li>4. Verify the top panel is correctly installed and all screws are in place.</li> <li>5. Verify microswitch operation – Readjust if necessary.</li> <li>6. No air for gate opening – Verify air supply line.</li> <li>7. If situation reoccurs, call STERIS.</li> </ol>

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**IMPORTANT:** A listing of the Safety Precautions to be observed when operating this equipment can be found in SECTION 1. Do not operate equipment until you have become familiar with this information.

To order replacement parts and/or supply products, proceed as follows:

1. Include the description and part/order number as listed in **Table 7-1**.
2. Include the model and serial numbers of the bedding dispenser on the order.
3. Send the order directly to the STERIS sales and service center serving your area.
4. Contact STERIS for parts that are not listed below.

**NOTE:** Use only STERIS authorized parts on this equipment. Use of unauthorized parts will void the warranty.

**Table 7-1. Replacement Parts**

Description	Part Number
<b>Pneumatics</b>	
FILTER/REGULATOR, Air	P117940-749
GAUGE, Pressure	P117955-182
CYLINDER, Air	P117940-741
<b>Electrical</b>	
SWITCH, Photoelectric	P117912-645
FUSE, 10 Amp, 600 V	P117902-672
FUSE, 6 Amp, 600 V	P117912-706
BULB, Indicator Light	P117907-431
LENS, White	P117950-068
LENS, Green	P117950-065
SWITCH, Safety	P117912-878
TIMER, 0-1 sec.	P117917-023
TIMER, 0.1 sec.-100 hr.	P117902-740
<b>Miscellaneous</b>	
BAG, Dust Collector	P117943-532
AGITATOR, Bedding	P117017-814
GREASE, Lithium-Based	P117951-457

**Table 7-2. Approved Lubricants for Gear Box**

<b>Manufacturer</b>	<b>Worm Gears AGMA #7 Compounded</b>	<b>Spur, Bevel, Helical AGMA #4 EP</b>
Chevron Oil Co.	Cylinder Oil 460X	NL Gear Compound #150
Exxon Oil Co.	Cyclesstic TK 460	Spartan EP 150
Gulf Oil Co.	Transgear EP 460	EP Lubricant HD 150
Mobil Oil Co.	600 W Cylinder Oil	Mobilgear 629
Shell Oil Co.	Valvata J460	Omala 150
Sun Oil Co.	Gear Oil 7C	Suneco 1060
Texaco Inc.	Vanguard Cylinder Oil 460	Meropa 150

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